AMENDMENTS

In the Claims:

Please add the following new claims:

-- 97
~~49.~~ A sequencing chip plate comprising an array of microchips, each of said microchips comprising an array of oligonucleotide probes immobilized on the surface of each of said microchips.

B2 99 97
~~50.~~ The plate of claim ~~49~~, wherein said oligonucleotide probes are RNA or DNA probes.

Rule 126 99 97
~~51.~~ The plate of claim ~~49~~, wherein said plate is a 96-well plate.

100 97
~~52.~~ The plate of claim ~~49~~, wherein said oligonucleotide probes are between about 4 and about 9 base pairs in length.

101 100
~~53.~~ The plate of claim ~~52~~, wherein said oligonucleotide probes are 4 base pairs in length.

102 101
~~54.~~ The plate of claim ~~53~~, wherein said oligonucleotide probes are 5 base pairs in length.

103 100
~~55.~~ The plate of claim ~~52~~, wherein said oligonucleotide probes are 6 base pairs in length.

104 100
~~56.~~ The plate of claim ~~52~~, wherein said oligonucleotide probes are 7 base pairs in length.

105 100
~~57.~~ The plate of claim ~~52~~, wherein said oligonucleotide probes are 8 base pairs in length.

106 100
~~58.~~ The plate of claim ~~52~~, wherein said oligonucleotide probes are 9 base pairs in length.

107 97
~~59.~~ The plate of claim 49, wherein said oligonucleotide probes are attached to a plurality of supports made of nylon, glass, polystyrene or teflon, and said plurality of supports are immobilized on said microchips.

108 107
~~60.~~ The plate of claim ~~59~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via phosphodiester linkage.

109 107
~~61.~~ The plate of claim ~~59~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via a light-activated synthetic mechanism.

110 97
~~62.~~ The plate of claim ~~49~~, wherein said oligonucleotide probes are immobilized on said microchips via a biotin-streptavidin linker.

111 97
~~63.~~ The plate of claim ~~49~~, wherein at least one of said oligonucleotide probes contains a modified or universal base.

B1

112
~~64.~~ A method of making a sequencing plate comprising the steps of:

(i) providing a plate having a plurality of wells;

(ii) providing a plurality of microchips, each of said microchips comprising an array of oligonucleotide probes attached to each of said microchips; and

(iii) disposing said plurality of microchips in said plurality of wells.

113 112
~~65.~~ The method of claim ~~64~~, wherein said oligonucleotide probes are RNA or DNA probes.

114 112
~~66.~~ The method of claim ~~64~~, wherein said plate is a 96-well plate.

115 112
67. The method of claim 64, wherein said oligonucleotide probes are between about 4 and about 9 base pairs in length.

116 115
68. The method of claim 67, wherein said oligonucleotide probes are 4 base pairs in length.

117 115
69. The method of claim 67, wherein said oligonucleotide probes are 5 base pairs in length.

118 115
70. The method of claim 67, wherein said oligonucleotide probes are 6 base pairs in length.

119 115
71. The method of claim 67, wherein said oligonucleotide probes are 7 base pairs in length.

120 115
72. The method of claim 67, wherein said oligonucleotide probes are 8 base pairs in length.

121 115
73. The method of claim 67, wherein said oligonucleotide probes are 9 base pairs in length.

122 112
74. The method of claim 64, wherein said oligonucleotide probes are attached to a plurality of supports made of nylon, glass, polystyrene or teflon, and said plurality of supports are immobilized on said microchips.

123 122
75. The method of claim 74, wherein said oligonucleotide probes are immobilized on said plurality of supports via phosphodiester linkage.

124 122
76. The method of claim 74, wherein said oligonucleotide probes are immobilized on said plurality of supports via a light-activated synthetic mechanism.

125 122
77. The method of claim 74, wherein said oligonucleotide probes are immobilized on said microchips via a biotin-streptavidin linker.

126 112
78. The method of claim 64, wherein at least one of said oligonucleotide probes contains a modified or universal base.

120
79. A sequencing microchip comprising an array of oligonucleotide probes, each of said probes having the same length and comprising all combinations of sequences for the length of said probe, wherein said probes are immobilized on the surface of said microchip.

128 127
~~80.~~ The microchip of claim ~~79~~, wherein said oligonucleotide probes are attached to a plurality of supports made of nylon, glass, polystyrene or teflon, and said plurality of supports are immobilized on said microchips.

129 128
~~81.~~ The microchip of claim ~~80~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via phosphodiester linkage.

130 128
~~82.~~ The microchip of claim ~~80~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via a light-activated synthetic mechanism.

131 128
~~83.~~ The microchip of claim ~~80~~, wherein said oligonucleotide probes are immobilized on said microchips via a biotin-streptavidin linker.

132 127
~~84.~~ The microchip of claim ~~79~~, wherein said oligonucleotide probes are between about 4 and about 9 base pairs in length.

133 132
~~85.~~ The microchip of claim ~~84~~, wherein said oligonucleotide probes are 4 base pairs in length.

134 132
~~86.~~ The microchip of claim ~~84~~, wherein said oligonucleotide probes are 5 base pairs in length.

135 132
87. The microchip of claim 84, wherein said oligonucleotide probes are 6 base pairs in length.

136 132
88. The microchip of claim 84, wherein said oligonucleotide probes are 7 base pairs in length.

137 132
89. The microchip of claim 84, wherein said oligonucleotide probes are 8 base pairs in length.

138 132
90. The microchip of claim 84, wherein said oligonucleotide probes are 9 base pairs in length.

135 127
91. The microchip of claim 79, wherein at least one of said oligonucleotide probes contains a modified or universal base.

140
92. A method for making a sequencing microchip comprising the steps of:

(i) providing an array of oligonucleotide probes, each of said probes having the same length and comprising all combinations of sequences for the length of said probe; and

(ii) immobilizing said probes on the surface of said microchip.

141 140
~~93.~~ The method of claim ~~92~~, wherein said oligonucleotide probes are attached to a plurality of supports made of nylon, glass, polystyrene or teflon, and said plurality of supports are immobilized on said microchips.

142 141
~~94.~~ The method of claim ~~93~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via phosphodiester linkage.

143 141
~~95.~~ The method of claim ~~93~~, wherein said oligonucleotide probes are immobilized on said plurality of supports via a light-activated synthetic mechanism.

144 141
~~96.~~ The method of claim ~~93~~, wherein said oligonucleotide probes are immobilized on said microchips via a biotin-streptavidin linker.

145 140
~~97.~~ The method of claim ~~92~~, wherein said oligonucleotide probes are between about 4 and about 9 base pairs in length.

146 145
~~98.~~ The method of claim ~~97~~, wherein said oligonucleotide probes are 4 base pairs in length.

147 145
99. The method of claim 97, wherein said oligonucleotide probes are 5 base pairs in length.

148 145
100. The method of claim 97, wherein said oligonucleotide probes are 6 base pairs in length.

149 145
101. The method of claim 97, wherein said oligonucleotide probes are 7 base pairs in length.

150 145
102. The method of claim 97, wherein said oligonucleotide probes are 8 base pairs in length.

151 145
103. The method of claim 97, wherein said oligonucleotide probes are 9 base pairs in length.

152 140
104. The method of claim 92, wherein at least one of said oligonucleotide probes contains a modified or universal base.

153
105. A method for making a sequencing chip comprising the steps of:

(a) providing a body comprising a plurality of wells defining spaces;

(b) providing a chip comprising on its surface a plurality of oligonucleotide probe arrays, each oligonucleotide probe array comprising a collection of oligonucleotide probes, at least two of which are different, arranged in a spacially defined and physically addressable manner;

(c) attaching the wafer to the body so that the oligonucleotide probe arrays are exposed to the spaces of the wells.

B1 Cont'd

154
106. The method of claim 153, wherein the probes are DNA or RNA molecules.

155
107. A method for making a sequencing chip comprising the steps of providing a chip comprising on its surface a plurality of oligonucleotide probe arrays, each oligonucleotide probe array comprising a collection of oligonucleotide probes, at least two of which are different, arranged in a spacially defined and physically addressable manner, and applying a material resistant not the flow of a liquid sample so as to surround the oligonucleotide probe arrays.

156
108. The method of claim 155, wherein the probes are DNA or RNA molecules. --